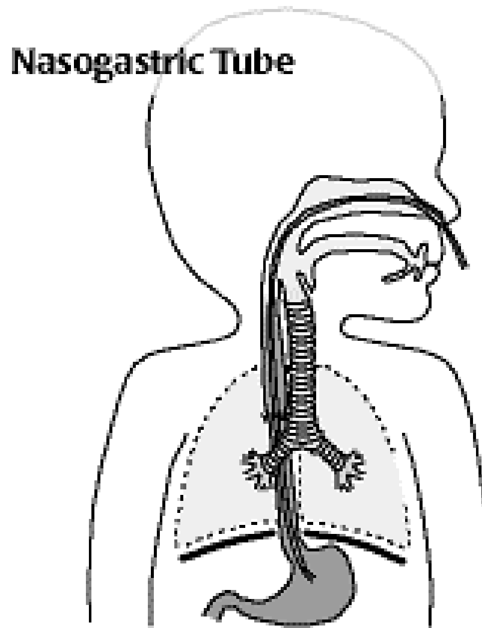
Beth Israel Deaconess
Medical Center
Newborn Intensive Care Unit

Information for Parents

Nasogastric Feeding of Your Infant at Home

Your child is going home with a nasogastric (NG) feeding tube. The method of tube insertion, through the nose and into the stomach defines it as a 'nasogastric' tube. An NG feeding tube is needed to give your child liquid medication and/or food when he or she is unable to take enough by mouth. The tube passes through the nose, into the food pipe (esophagus), and ends up in the stomach. This information sheet gives you instructions on how to insert a nasogastric (NG) feeding tube, how to make sure the tube is properly placed, and what to do if you have any concerns or problems related to the NG feeds. Inserting the tube this way keeps it very stable and prolongs the length of time it can stay in place. The same tube can remain in place for up to one month before it needs to be changed.



This packet contains sections on:

- NG Supplies and Timing of Discharge Planning
- Nasogastric Feeding of Your Infant at Home
- Inserting a Feeding Tube
- Before Each Feeding
- How to Manage an NG Feeding-Related Emergency
- Additional Information About NG Feedings

Information for Parents

NG Supplies and Timing of Discharge Planning

Once the decision is made to go home with NG feeds, it will take approximately 4-5 business days to make all the necessary arrangements and to obtain the supplies.

Commonly needed NG supplies:

(1) NG tube: The tubes come in a few different sizes. Your baby uses a ______French tube.
(2) Feeding pump
(3) IV pole
(4) Syringes (non-sterile)
(5) Infant formula to be used
(6) Feeding bags and tubing
(7) Tape to secure tubing
(8) Stethoscope
(9) Extension tubing (if needed)
(10) Any stoma dressing supplies

Tasks the families must complete:

(1) Take a NICU-offered CPR class
(2) Meet with the Case Manager to set up a date/ time for the vendor to teach them to use the home equipment
(3) Confirm that all equipment and supplies for home have been delivered

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Inserting a Feeding Tube

The tube is made of a soft material called silicone. This type of tube is very flexible and very comfortable for babies. Before NICU discharge, your baby had a feeding tube inserted to ________cm. This is the shortest length the feeding tube will be because as your baby grows, the proper length for the feeding tube to be inserted will increase. It is a good idea to get into the habit of determining how far to insert the feeding tube before you insert it if you haven't measured for more than a few days.

Feeding tubes should be changed at least once a month or if the tube becomes dislodged. It is common for a baby to fuss while the tube is being inserted. Because one end of the tube passes down the back of the throat, a baby may also gag, sputter, or cough while the tube is being put in. This is normal, but if your baby appears overly distressed, you should stop, take the tube out, calm your baby and try again.

These are the steps for measuring and inserting a nasogastric feeding tube:

1. Enlist the aid of another person. This person can help keep the baby calm, and hold him or her during the procedure.
2. Wash your hands.
3. Assemble your supplies. You will need 1 feeding tube, one 5 mL syringe, one stethoscope, water soluble lubricant for the tube and a clear dressing to secure the tube.
4. Take the feeding tube and measure the correct insertion distance as follows:
    - Beginning with the end of the feeding tube that would be in the stomach, measure the distance from the tip of the nose to the earlobe
    - then measure the distance to the tip of the breast bone/center of the ribs at the lowest part (the xyphoid process)
    - Take that measured distance and add 1 centimeter to it.
    - This is the distance for the tip of the tube to be positioned in the stomach.

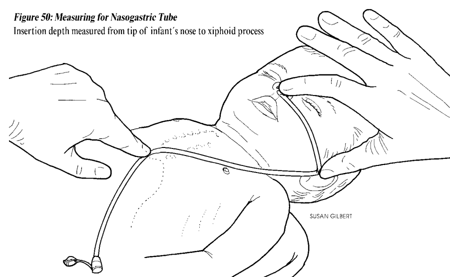

Figure 50: Measuring for Nasogastric Tube
Insertion depth measured from tip of infant's nose to xiphoid process

5. With your baby on his/her back, swaddle your baby. This will help prevent your baby from grabbing the tube while you are inserting it.

6. Lubricate the end of the feeding tube with a water-soluble lubricant and gently insert it into one side of the nose, aiming straight back. The tube should easily pass through the nasal passages and exit the back of the mouth.
7. Continue to gently advance the tube until you reach the centimeter mark that you determined in #4 above.
8. Before securing the tube, confirm the placement of the feeding tube by doing the following:
    - Draw in 1-2 mL of air into a 5 mL syringe
    - Secure the 5 mL syringe to the end of the feeding tube
    - Place the stethoscope in your ears, with the flat surface (aka diaphragm) over the left part of the belly area, just under the ribs.
    - Quickly push the air through the tube while you listen over the stomach. You should hear a swoosh of air that will let you know the tube is most likely in the stomach.
    - If you do not hear the swoosh of air sound, disconnect the syringe, draw in another 1-2 mL of air, and try again, briskly depressing the plunger of the syringe while listening over the stomach.
9. If you still do not hear air entry into the stomach, you must remove the tube and attempt to reinsert it.
10. When your tube insertion is successful, try to pull back the air that you introduced into the stomach. This is not always possible.
11. Another test for correct positioning is to gently pull back on the syringe. You may be able to get some of the past feeding from the stomach. It is not always possible to get a stomach content return such as this. If you do see some fluid coming back, you can stop and use the syringe to gently return the contents to the infant.
12. If you have any doubt as to the correct placement of the feeding tube, DO NOT USE IT and remove it. Call your pediatrician or Children's Hospital Gastroenterology Enteral Tube Department at 617-355-TUBE(8823) for assistance.
13. Once you are certain about the correct placement of the tube, secure the tube in place to the cheek using the clear dressing provided. Be sure that the correct centimeter marking is visible where the tube enters the nose.
14. On a piece of tape, write the date, time, and centimeter marking. Place the tape around the end of the feeding tube with this information so it is easily available.

Additional Information About NG Feedings

The most common method used to confirm tube placement is the stethoscope method described above. Alternatively, some VNA agencies use the pH-method to confirm tube placement. The following is provided as a reference.

To check pH (level of acid) of stomach contents ("juices"):

- Attach a syringe to the end of the tube
- Withdraw (pull back on) the syringe plunger slowly to pull back stomach juices
- Apply 1-2 drops of the stomach juices to pH paper.
- A pH of 0-5 suggests the tube is properly placed in the stomach.

When an infant eats by mouth, the baby can stop eating when the stomach becomes too full and allow some emptying to occur before resuming eating. An infant who is fed by a feeding tube has no control over the amount of food going into the stomach. Feedings given by this method must be done slowly to allow to stomach to gradually expand and not become distended. Problems that may be encountered when the feedings are given too rapidly include discomfort to the infant, gagging, spitting, vomiting, or general discomfort.

Do not advance the feeding tube into the stomach further than was measured. The tube may kink in the stomach, or exit the stomach toward the small intestines. Babies can pull feeding tubes out easily. If you find the feeding tube lying in the bed, insert a clean tube. If you are with the baby when the tube is pulled out, or you take the tube out because its position has changed, you can use the same tube as long as it is within the 30 day period. Be sure to wipe the end with a clean cloth to remove any secretions on the exterior. Use the syringe to flush out any fluid that may be inside of the tube before reinserting it.

- **DO NOT force** the tube. If the tube does not go in easily, take a quick break, and then try again. You may try the other nostril. If you still cannot get the tube to pass easily, Call your VNA, pediatrician, or Children's Hospital Gastroenterology Enteral Tube Department at 617-355-TUBE(8823) for assistance.
- Your child is likely to gag or cough during this procedure. When this happens, stop for a few seconds until the gagging or coughing stops. Then continue passing the tube. Sucking on a pacifier may help an infant.
- **Remove the tube immediately if your child has severe coughing, blueness, difficulty breathing or vomits**.

  Special Notes:____

  ____

  ____

  ____

Before Each Feeding

Before each feeding, it is important to check the tube for correct placement. Babies may pull at the tube, or the tape can loosen and the tube can slide out.

1. Check the centimeter marking where the tube enters the nose. This should be exactly at the number where it was taped.
2. Place the stethoscope in your ears, with the diaphragm (the flat surface) over the left part of the belly area, just under the ribs
3. Draw in 1-2 mL of air into a 5 mL syringe
4. Secure the 5 mL syringe to the end of the feeding tube
5. Place the stethoscope in your ears, with the diaphragm (aka flat surface) over the left part of the belly area, just under the ribs.
6. Quickly push the air through the tube while you listen over the stomach. You should hear a swoosh of air that will let you know the tube is most likely in the stomach.
7. If you do not hear the swoosh of air sound, disconnect the syringe, draw in another 1-2 mL of air, and try again, briskly depressing the plunger of the syringe while listening over the stomach.
8. If you do not hear air entry into the stomach, you must not use the tube.
9. If you hear air entry into the stomach, try to pull back the air that you introduced into the stomach. This is not always possible.
10. Another test for correct positioning is to gently pull back on the syringe. You may be able to get some of the past feeding from the stomach. It is not always possible to get a stomach content return such as this. If you do see some fluid coming back, you can stop and use the syringe to gently return the contents to the baby.

There are several things to be aware of while your baby receives a feeding this way:

1. If your baby likes to suck, offer a pacifier during the feeding. This may help to keep your baby calm, and aid the association between sucking and a full stomach.
2. Hold your baby during the feeding, whenever possible. Feeding is a time of comfort, and young babies are held when being fed by other methods.
3. Your baby can lay on his/her back during a tube feeding if the care team determines this is safe and appropriate for your baby.
4. Do not leave your baby alone while a feeding is going in because the feeding tube can become dislodged from its correct position.

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How to Manage an NG Feeding-Related Emergency

EMERGENCY: **Call 911 if your baby has any breathing difficulties that do not improve. Do not hesitate.**

Stop the feeding *immediately* if your baby:

- begins to have breathing difficulties
- becomes 'dusky', blue, or pale
- begins to choke or cough
- has excess spitting or feeding that spills out of the mouth

Remove the feeding tube at any sign of breathing problems, including a color change that does not improve.

If you are unable to confirm placement or reinsert the feeding tube:

- If your child is being followed by a visiting nurse (a nurse who comes to your home to see your child), call the Visiting Nurse Agency (VNA) first because many VNA's are authorized to come to your home and re-insert NG tubes.
- If your child is not followed by VNA, call your pediatrician or Children's Hospital Gastroenterology Enteral Tube Department at 617-355-TUBE(8823) for assistance.

Parents can call Children's Hospital Gastroenterology Enteral Tube Department at 617-355-TUBE(8823) at any time (including nights, weekends, and holidays) regarding an urgent or non-urgent problem with NG feeding. The message will provide directions on obtaining assistance with NG tube/feeding related issues.